

Garant**GARANT Master Form Steel fluteless machine tap with oil grooves HSS-E-PM Form C 6HX, TiAlN, M: M20****Order data**

Order number	139194 M20
GTIN	4062406383350
Item class	11I

Description**Version:****DIN 2174** ($\approx$ DIN 371 $\leq$ M10; $\approx$ DIN 376 $\geq$ M12).**Tolerance class: ISO 2X/6HX.**

The latest generation of **high-performance fluteless taps**, specially developed for **use in steel materials**.

- **Optimised polygon geometry for a lower torque.**
- **Multi-layer HIPIMS coating for high wear resistance.**
- **HSS-E-PM substrate for exceptional process reliability.**

Technical description

Thread Ø	20 mm
Tolerance class	ISO 2X 6HX
Shank square □	12 mm
Thread pitch	2.5 mm
Thread depth	60 mm
Tapping hole Ø guide value	18.9 mm
Number of cutting edges Z	8
Thread size	M20
Overall length L	140 mm
Series	GARANT Master

Shank Ø D _s	16 mm
Number of clamping slots	8
Coating	TiAlN
Thread type	M
Flank angle	60 degrees
Tool material	HSS E PM
Standard	DIN 2174
Thread standard	DIN 13
Taper lead form	C
Shank	Plain shank with h9
Through-coolant	no
Application for type of drilling	up to 3×D for blind holes
Application for type of drilling	up to 3×D for through holes
Cutting direction	right-hand
Colour ring	without
Type of product	Fluteless tap

User data

	Suitability	V _c	ISO code
Aluminium (short chipping)	suitable	38 m/min	N
Steel < 500 N/mm ²	suitable	37 m/min	P
Steel < 750 N/mm ²	suitable	35 m/min	P
Steel < 900 N/mm ²	suitable	27 m/min	P
Steel < 1100 N/mm ²	suitable	18 m/min	P
Steel < 1400 N/mm ²	suitable	12 m/min	P
INOX < 900 N/mm ²	suitable	12 m/min	M
INOX > 900 N/mm ²	suitable	7 m/min	M
CuZn	suitable	22 m/min	N

Oil	suitable
wet maximum	suitable
wet minimum	suitable